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TA-F222ESA/F570ES

SERVICE MANUAL

Canadian Model
AEP Model
TA-F570ES
E Model
TA-F222ESA



Photo : TA-F570ES

SPECIFICATIONS

Amplifier Section

| Items | Condition | | Data |
|---|--|---|---|
| | | | TA-F222ESA/TA-F570ES |
| Continuous RMS power output (both channels driven simultaneously) | 4 ohm, 20 Hz - 20 kHz | Countries other than North European countries | 120 W + 120 W (THD 0.01%) (DIN: 175 W + 175 W) |
| | | North European countries | 95 W + 95 W (THD 0.006%) (DIN: 115 W + 115 W) |
| | 6 ohms, 20 Hz - 20 kHz | 8 ohms, 20 Hz - 20 kHz | Countries other than North European countries North European countries |
| Power band width (IHF) | 8 ohms, THD 0.02% | | 10 Hz - 100 kHz at 45 W |
| Dynamic headroom (*78 IHF) | 4 ohms | | 2 dB |
| | 8 ohms | | 1.2 dB |
| Total harmonic distortion | 8 ohms, at 10 watt output | | 0.004% |
| Intermodulation (IM) distortion 60 Hz : 7 kHz = 4 : 1 | 4 ohms, at rated output | | 0.008% |
| | 6 ohms, at rated output | | 0.006% |
| | 8 ohms, at rated output | | 0.004% |
| Damping factor | 8 ohms, at 1 kHz | | 100 |
| Residual noise | network A, 8 ohms | | less than 100 μ V |
| Frequency response | PHONO MM | | RIAA equalization curve ± 0.2 dB |
| | TUNER, CD TAPE 1,2,3, DIRECT IN | | 2 Hz - 200 kHz ± 3 dB |
| Input sensitivity | PHONO | MC | 0.17 mV 100 ohms |
| | | MM | 2.5 mV, 50 kohms |
| | TUNER, CD, DIRECT IN, TAPE 1,2,3, ADAPTOR, AUX | | 150 mV, 20 kohms |

| Items | Condition | | Data |
|--------------------------|--|----|--|
| | | | TA-F222ESA/TA-F570ES |
| S/N (network) (*78 IHF) | PHONO | MC | 77 (0.5 mV) |
| | | MM | 95 (5.0 mV) |
| | TUNER, CD, DIRECT IN, TAPE 1,2,3, ADAPTOR, AUX | | 105 (150 mV) |
| Output voltage impedance | REC OUT 1,2,3 ADAPTOR | | 150 mV, 1 kohm |
| | HEADPHONES | | 25 milliwatts (at 8 ohms) Accepts low and high impedance headphones. |
| Tone controls | BASS, at 100 Hz | | ± 7 dB |
| | TREBLE, at 10 kHz | | ± 6 dB |
| Subsonic filter | - | | 6 dB/octave attenuation below 15 Hz |
| Muting | - | | - 20dB |

General

System
Preamplifier section: Low-noise high gain NFB type equalizer amplifier, passive type direct tone control
Power amplifier section: Pure-complementary SEPP power amplifier,

Power requirements

Canadian model: 120V AC, 60Hz
AEP, G model : 220-230V AC, 50/60 Hz
E model : 120V, 220V, or 240V AC, adjustable, 50/60Hz

— continued on next page —

INTEGRATED STEREO AMPLIFIER
SONY®

Power consumption

| | |
|----------------------|-------|
| Canadian model | 520VA |
| North European model | 180W |
| AEP, G model | 260W |
| E models | 260W |

AC outlet

| | |
|----------------|---|
| Canadian model | 2 switched, 120W/1 A max. 1 unswitched, 120W/1A max. |
| AEP, G model | — |
| E models | 1 switched, 100 W max. |

Dimensions Approx. 430×150×375mm (w/h/d)
 (17×5⁷/₈×14³/₄ inches)

weight Approx. 12kg (26 lbs 8 oz) net

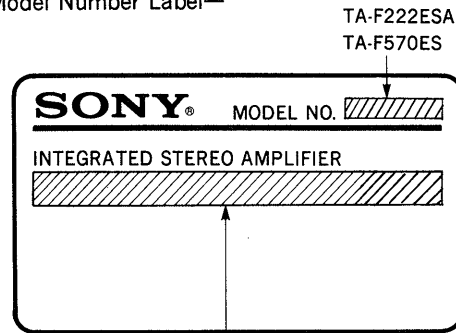
Design and specifications subject to change without notice.

Note

This appliance conforms with EEC directive 87/308/EEC regarding interference suppression.



MODEL IDENTIFICATION

—Model Number Label—




Canadian model: AC 120V 60Hz 400VA
 AEP, G model : AC 220V—230V~50/60Hz
 E model : AC120/220/240V~50/60Hz 230W
 • G model: Germany model

SAFETY-RELATED COMPONENT WARNING!!

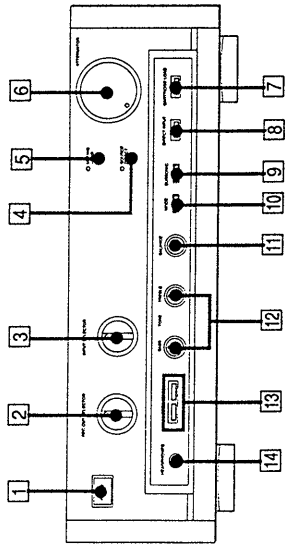
COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

Function of Controls

Front panel



1 POWER switch and indicator

After the power is turned on, the standby indicator lights in red as the built-in muting circuit activates. When the amplifier stays in a stable operating condition, the indicator lights in green.

The indicator lights in red if the unit detects shorting of circuit of the speaker outputs or in case of short-circuit of the inputs of DC components. In such a case, disconnect the power source and check the connected components and speaker systems.

2 REC OUT SELECTOR

Selects the program source sent to the REC OUT jacks for recording.

3 INPUT SELECTOR

Selects the desired program source for listening.

4 SOURCE DIRECT button and indicator

Depress the button. The red indicator lights and the circuits of the TONE control, SUBSONIC filter button, BALANCE control and MODE selector are disengaged without regard to the setting of the switches.

5 MUTING button and indicator

Depress the button to reduce the sound level by 20 dB. (Output voltage becomes 1/10.) Generally, keep the button released (OFF).

6 ATTENUATOR

Adjusts the sound level. To increase the sound level, turn the control clockwise. To decrease the level, turn the control counterclockwise.

Note

Turn down the sound level before switching on the unit. This prevents damage to speakers.

7 CARTRIDGE LOAD selector

Set the selector according to your cartridge.
MM: For moving-magnet type cartridge
MC: For moving-coil type cartridge

8 DIRECT INPUT selector

Set to SOURCE to select program source with the INPUT SELECTOR.
To listen to a program source processed through the equipment, such as graphic equalizer, connected to the ADAPTOR jacks, set it to SOURCE.
To listen to a program source connected to DIRECT IN jacks, set it to DIRECT.

9 SUBSONIC filter button

Depress the button to reduce noise components of less than 15 Hz, which cause modulation noise.

10 MODE selector

STEREO: For listening to a stereo program.
MONO: For listening to a monaural program.

11 BALANCE control

Adjusts the sound level of left and right speakers.

12 BASS and TREBLE TONE controls

Adjust the tone quality.
To increase bass or treble sound, turn the control clockwise. To decrease them, turn the control counterclockwise.

13 SPEAKERS buttons

Select speaker system A or B, or both.
To drive speaker system A: Depress A button.
To drive speaker system B: Depress B button.
To drive speaker system A and B: Depress A and B.
For headphones listening only, set both to OFF (□).

14 HEADPHONES jack

Accepts the stereo phone plug of headphones.

SECTION 1 GENERAL

This section is extracted from instruction manual.

SECTION 2 ELECTRICAL ADJUSTMENTS

Bias Adjustment

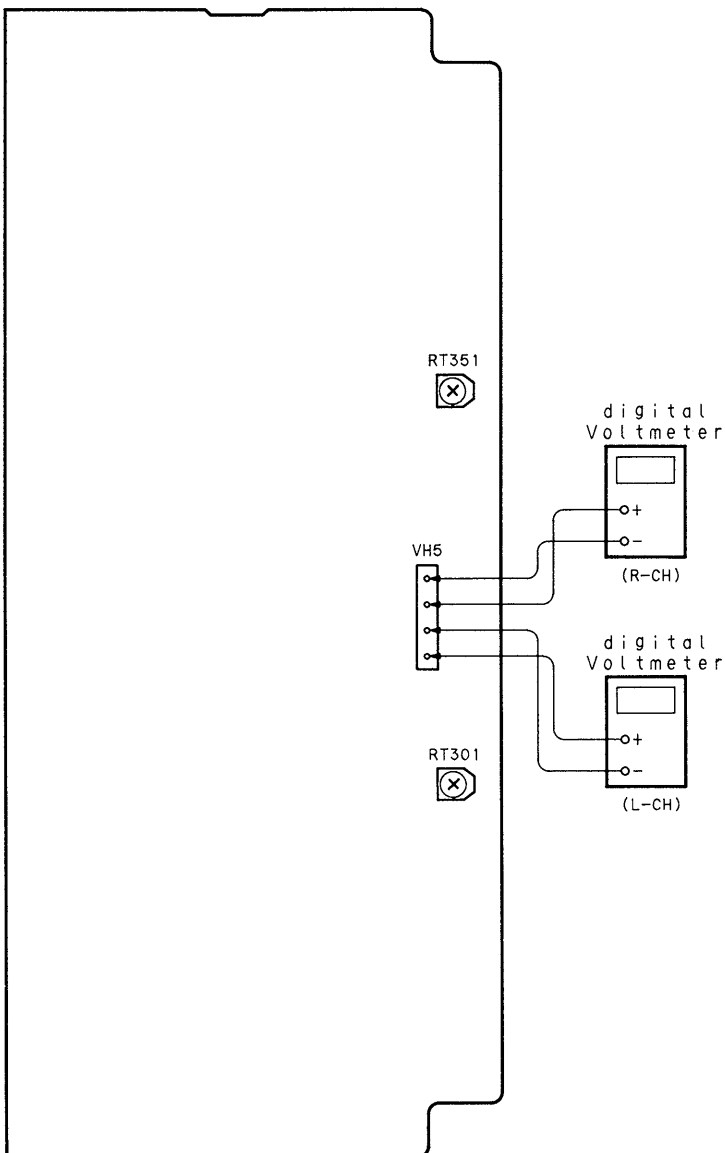
Note: Adjust the idling after tuning the unit on for about 10 minutes, giving it time to warm up.

Procedure :

1. Connect the digital voltmeter to VH5 on main board as follows.
2. Adjust RT301 (L-CL) and RT351 (R-CH) so that the digital voltmeter on signal reads 14mV at VH5.

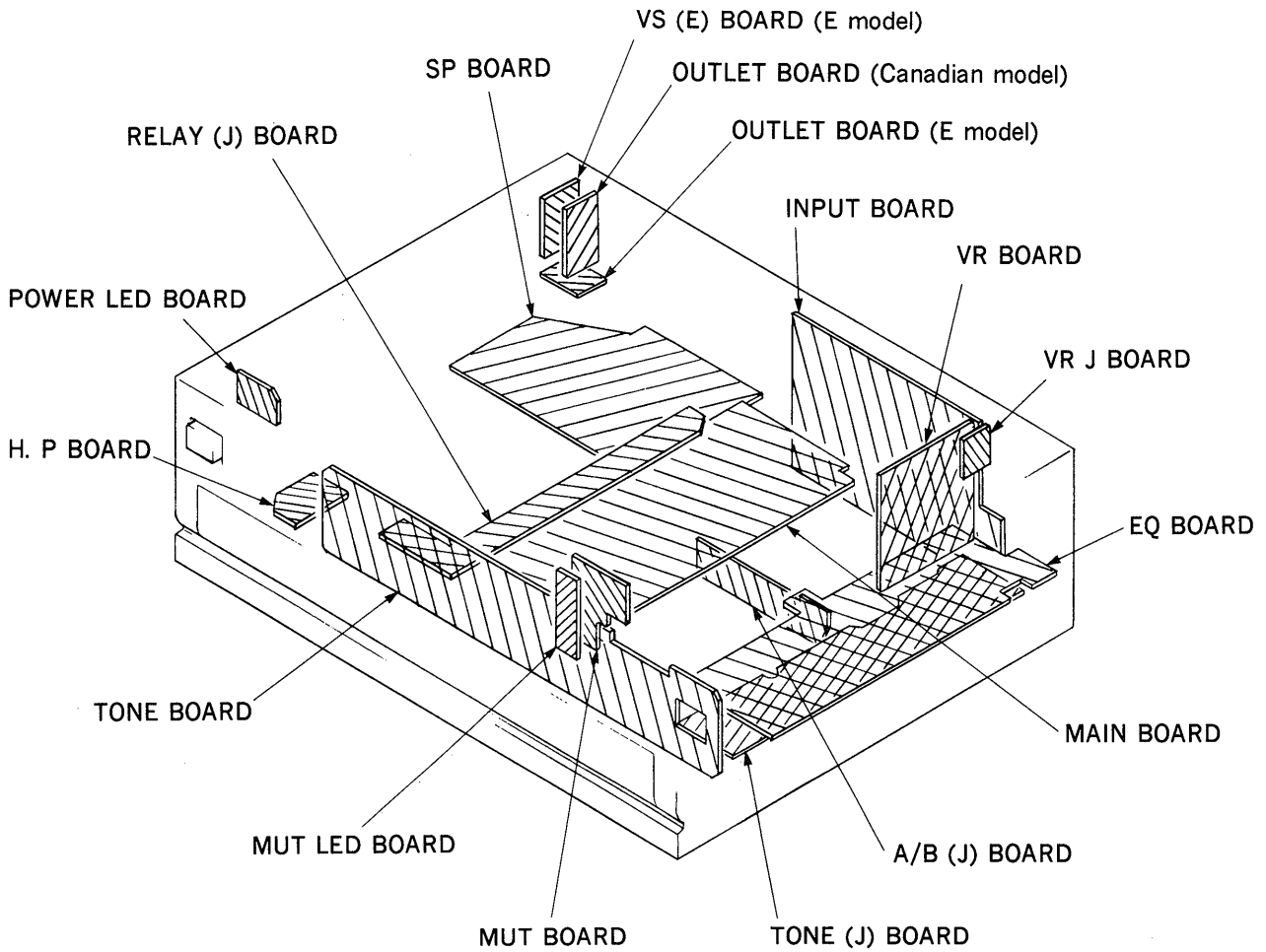
Adjustment Location :

[MAIN BOARD]
(component side)



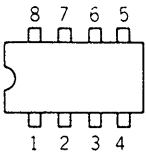
SECTION 3 DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION



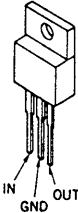
3-2. SEMICONDUCTOR LEAD LAYOUTS

RC4560DD

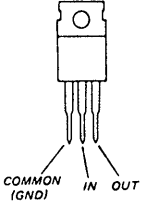


(Top view)

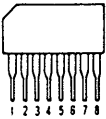
TA7815S



TA-7915S



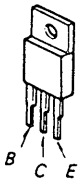
μPC1237HA



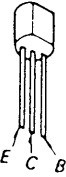
2SA733-QP
2SC945-P



2SA985A-QP
2SC2275A-P



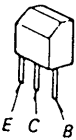
2SA988-PAFAEA
2SA1371-E
2SC2545-E



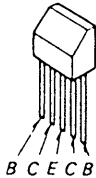
2SA1216M-OY
2SC2922M-OY



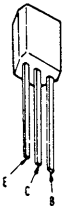
2SC1941-LK
2SD774-34



2SC2259-FG



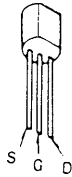
2SC2603-EF



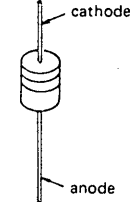
2SC3423-0



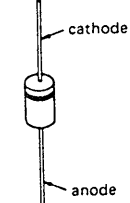
2SK246-GR2



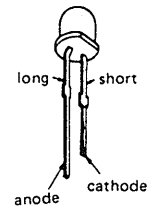
HZS6C3L
UZL-7M1
1SS120
11ES2



30DF2



SEL1516W
SEL2810A

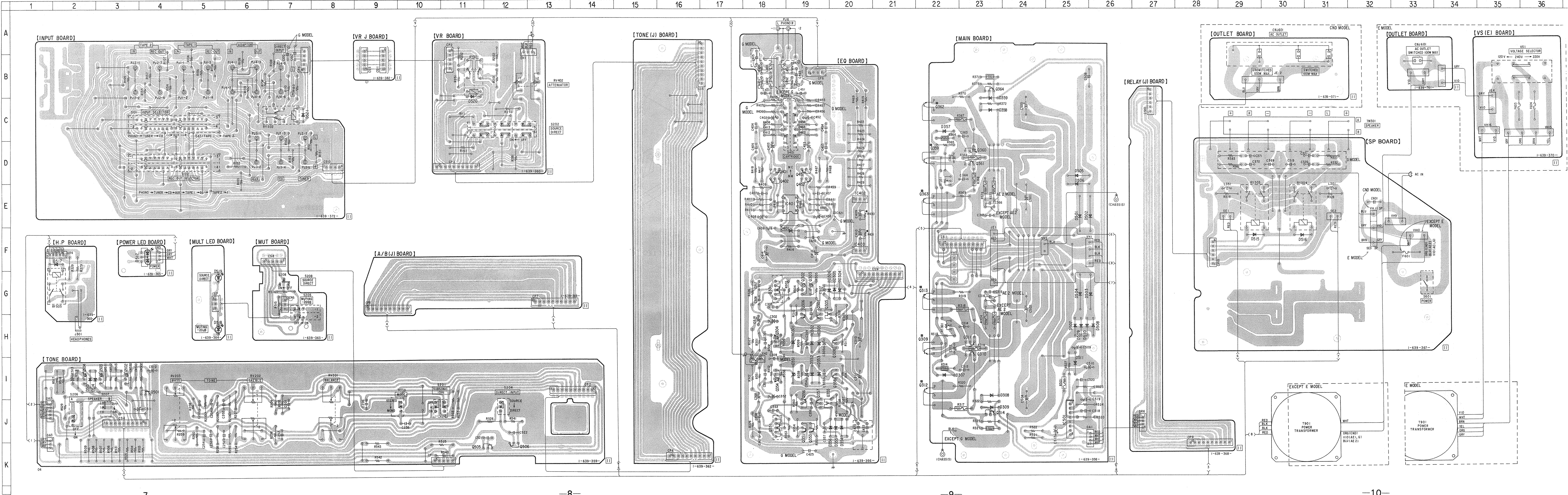


● Semiconductor Location

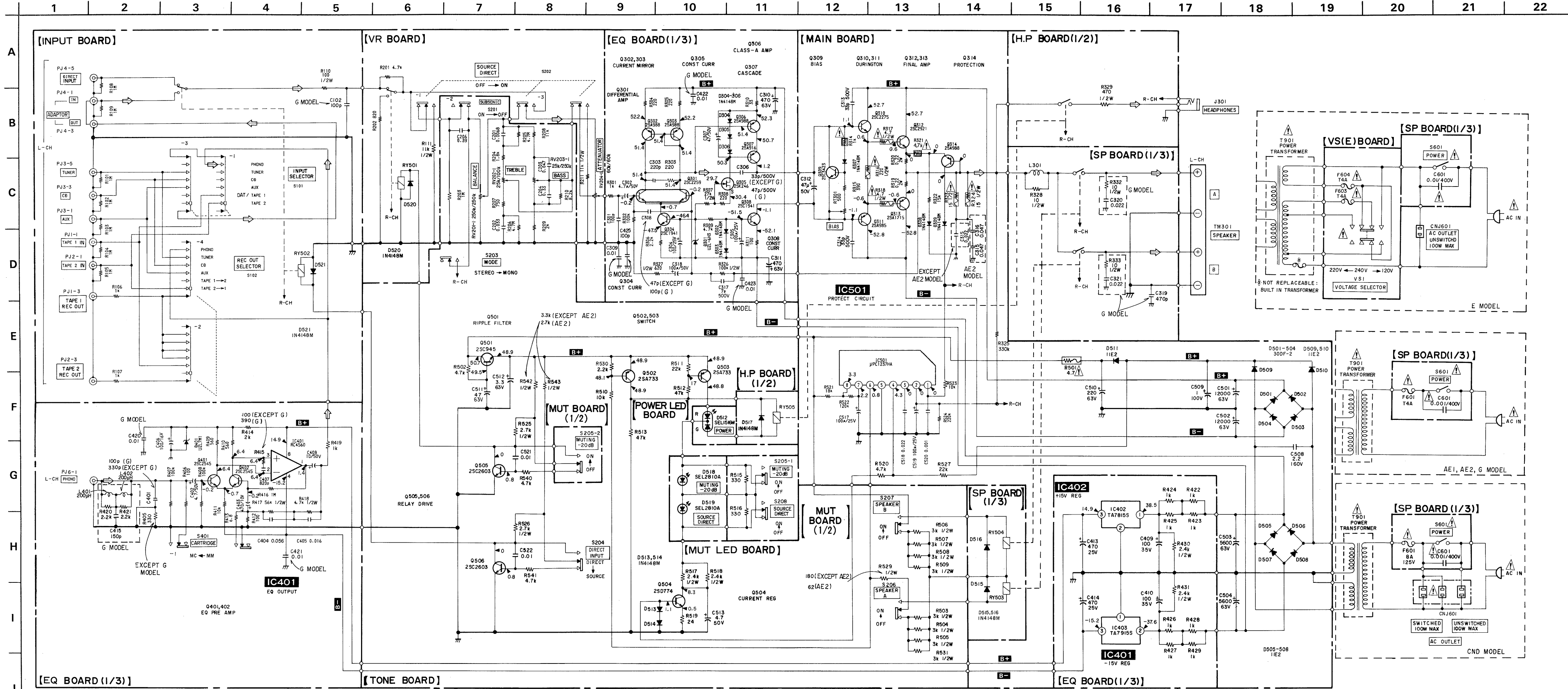
| Location | Ref. No. | Location | Ref. No. |
|----------|----------|----------|----------|
| D301 | H-19 | Q302 | G-19 |
| D302 | H-19 | Q303 | G-19 |
| D303 | H-19 | Q304 | H-18 |
| D304 | G-20 | Q305 | H-19 |
| D305 | G-20 | Q306 | H-19 |
| D306 | G-19 | Q307 | H-19 |
| D307 | I-22 | Q308 | H-20 |
| D308 | I-23 | Q309 | H-22 |
| D309 | J-23 | Q310 | H-23 |
| D351 | I-19 | Q311 | H-23 |
| D352 | I-19 | Q312 | I-22 |
| D353 | I-19 | Q313 | G-22 |
| D354 | J-20 | Q314 | J-23 |
| D355 | J-20 | Q351 | J-18 |
| D356 | J-19 | Q352 | J-19 |
| D357 | C-22 | Q353 | J-19 |
| D358 | C-23 | Q354 | I-18 |
| D359 | C-23 | Q355 | J-19 |
| D401 | F-19 | Q356 | J-19 |
| D501 | E-25 | Q357 | J-19 |
| D502 | E-25 | Q358 | I-20 |
| D503 | G-25 | Q359 | D-22 |
| D504 | G-25 | Q360 | D-23 |
| D505 | D-25 | Q361 | D-23 |
| D506 | E-25 | Q362 | C-22 |
| D507 | H-25 | Q363 | E-22 |
| D508 | H-26 | Q364 | B-23 |
| D509 | H-25 | Q401 | D-18 |
| D510 | H-25 | Q402 | D-18 |
| D511 | I-25 | Q451 | D-19 |
| D512 | F-3 | Q452 | D-19 |
| D513 | I-2 | Q501 | I-4 |
| D514 | I-2 | Q502 | I-3 |
| D515 | F-29 | Q503 | I-3 |
| D516 | F-30 | Q504 | I-2 |
| D517 | F-2 | Q505 | K-11 |
| D518 | H-5 | Q506 | K-12 |
| D519 | G-5 | | |
| D520 | C-11 | | |
| D521 | C-7 | | |
| IC401 | E-19 | | |
| IC402 | E-20 | | |
| IC403 | F-20 | | |
| IC501 | J-25 | | |
| Q301 | G-18 | | |

3-3. PRINTED WIRING BOARDS • Refer to page 6 for Semiconductor Lead Layouts and Semiconductor Location.

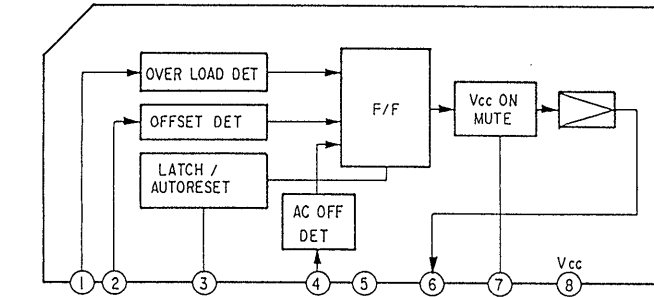
Note:
 ○ — : parts extracted from the component side.
 ● — : parts mounted on the conductor side.
 CND : Canadian model
 G : Germany model
 AE 2 : North European model



3-4. SCHEMATIC DIAGRAM



• IC Block Diagram
IC501 μ PC1237HA



Note:

- All capacitors are in μ F unless otherwise noted. pF: μ mF 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4$ W or less unless otherwise specified.
- Components for right channel have same values as for left channel. Reference numbers are coded from 150, 250, 350, 450.
- : nonflammable resistor.
- : fusible resistor.

Note:

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : adjustment for repair.
- Voltage are dc with respect to ground under on-signal conditions.
- Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- : PHONO
- CND : Canadian model
- G : Germany model
- AE 2 : North European model

SECTION 4 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- -XX, -X mean standardized parts, so they may have some differences from the original one.

- Color Indication of Appearance Parts
Example:

KNOB, BALANCE (WHITE)...(RED)

↑ ↑
Parts Color Cabinet's Color

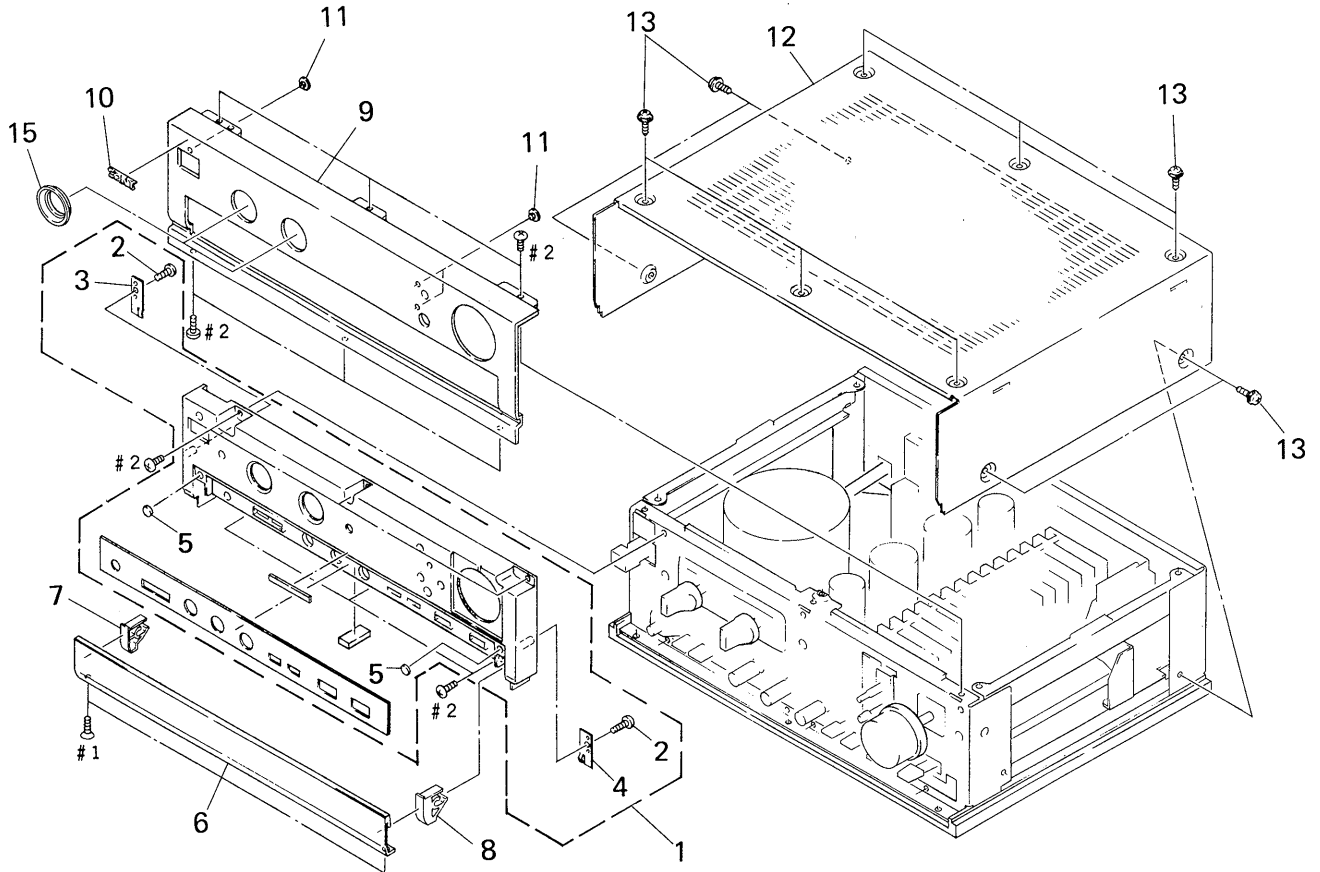
- CND : Canadian model
- G : Germany model
- AE 2 : North European model

- Hardware(# mark) list is given in the last of this parts list.

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

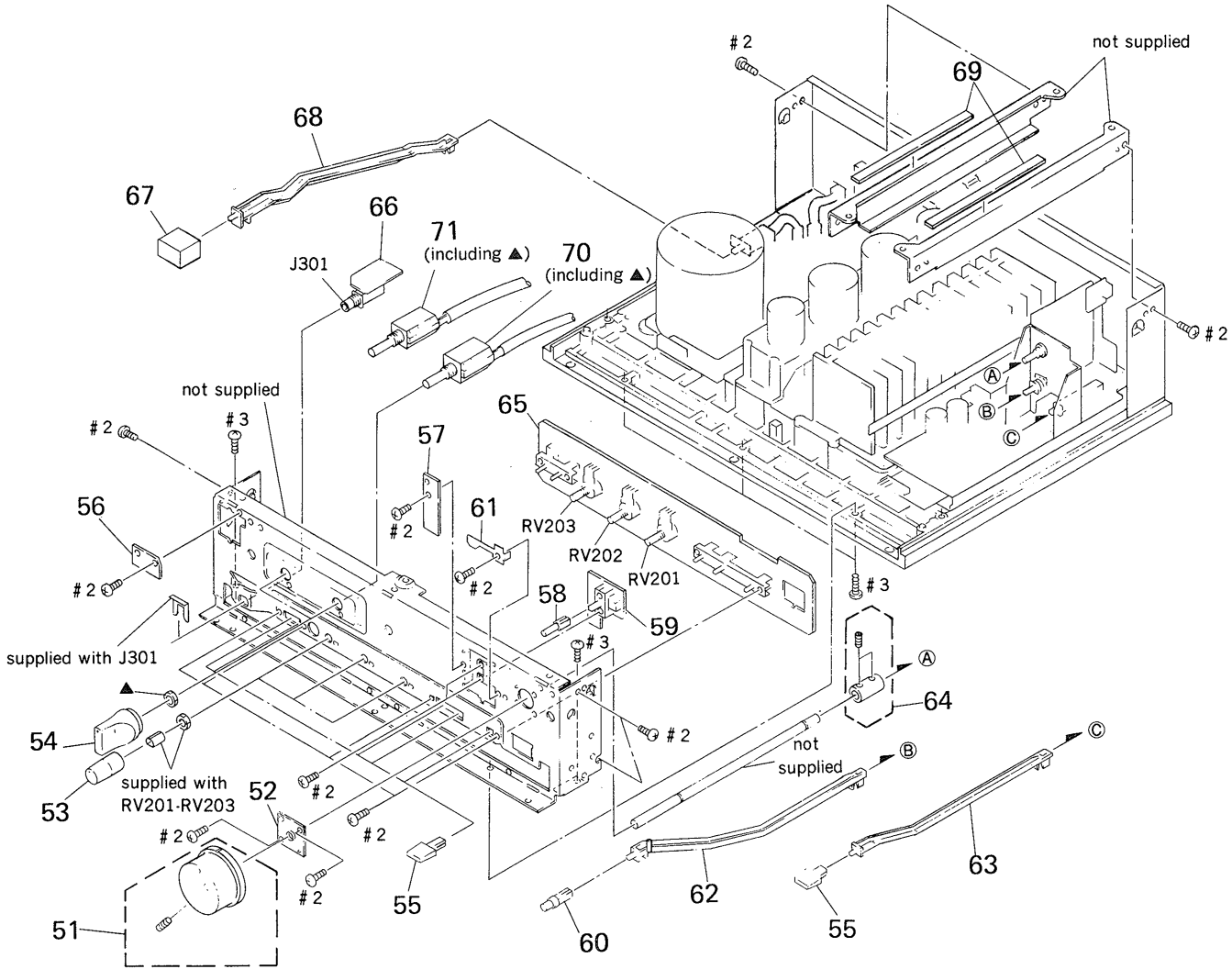
Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

1. CABINET



| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|----------------|----------------------------|--------|----------|----------------|----------------------------|--------|
| 1 | X-4941-787-1 | PANEL (BASE) ASSY | | 9 | 4-946-348-01 | PANEL, FRONT (AEP, G) | |
| 2 | 4-928-635-01 | SCREW, +BV (2.6X8) TAPPING | | 9 | 4-946-348-11 | PANEL, FRONT (Canadian) | |
| 3 | * 4-942-233-01 | SPRING (L), PLATE | | 9 | 4-946-348-21 | PANEL, FRONT (E) | |
| 4 | * 4-942-234-01 | SPRING (R), PLATE | | 10 | 4-908-848-01 | EMBLEM, SONY | |
| 5 | 4-879-274-01 | SPACER | | 11 | 4-931-646-01 | LENS, LED | |
| 6 | 4-946-346-01 | LID | | 12 | * 4-946-347-01 | CASE (Canadian, AE1, G, E) | |
| 7 | 4-942-225-01 | ARM (L) | | 12 | * 4-946-347-11 | CASE (AE2) | |
| 8 | 4-942-226-01 | ARM (R) | | 13 | 3-704-366-01 | SCREW (CASE) (M3X8) | |

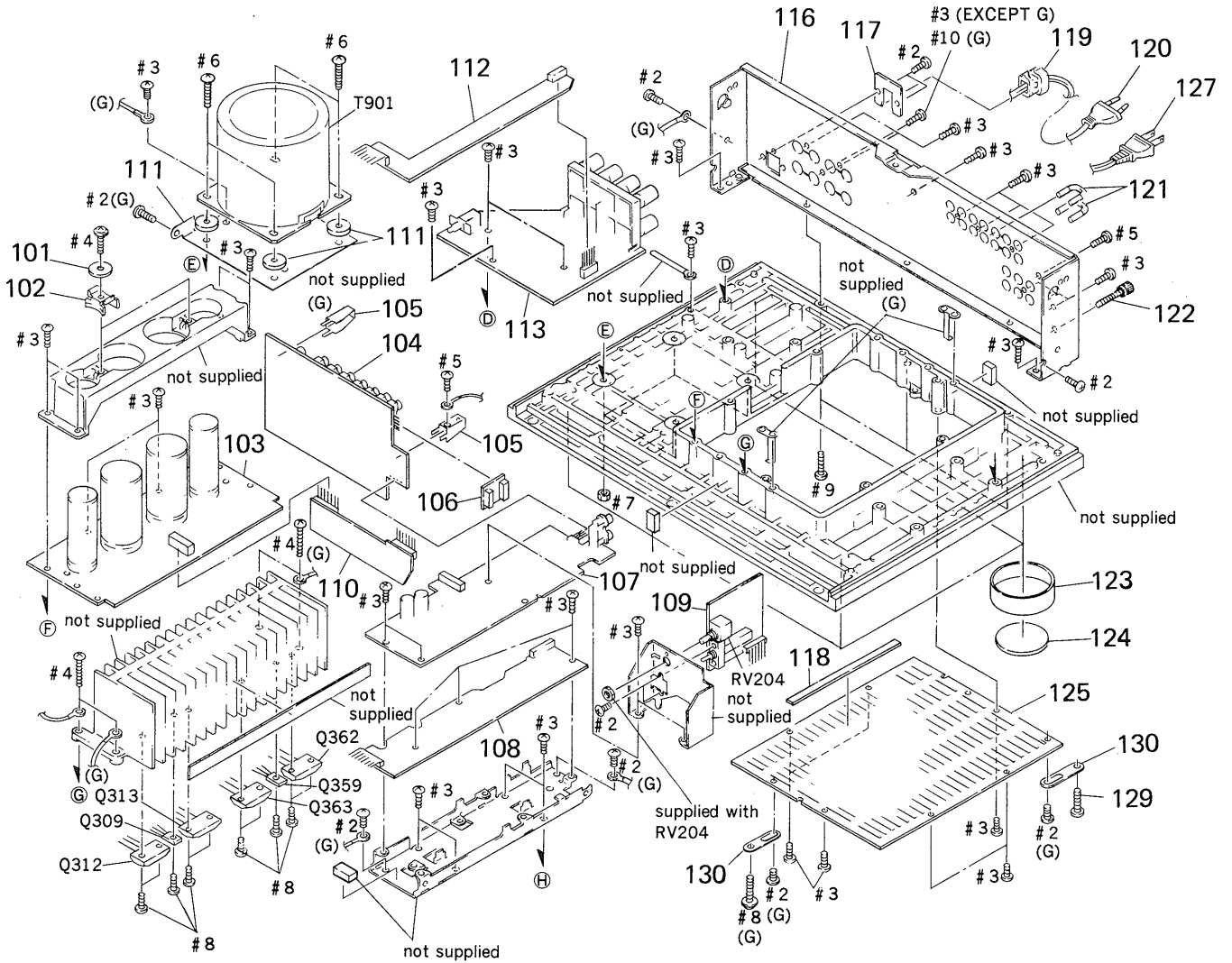
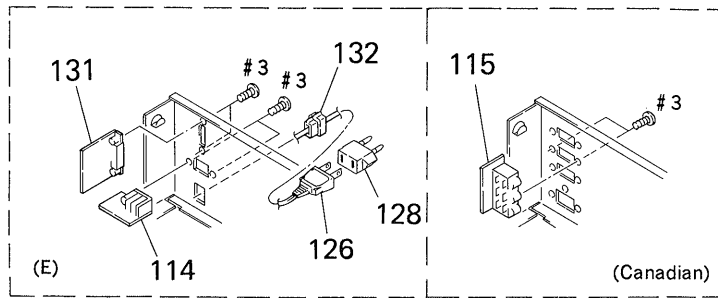
2. SUB CHASSIS



| Ref. No. | Part No. | Description | Remark |
|----------|----------------|-------------------|--------|
| 51 | 4-946-332-01 | KNOB (VOL-S) | |
| 52 | 4-946-335-01 | BRACKET (BEARING) | |
| 53 | 4-946-333-01 | KNOB (TONE) | |
| 54 | 4-945-601-01 | KNOB (F25) | |
| 55 | 4-942-228-01 | KNOB (3X13) | |
| 56 | * 1-639-365-11 | POWER LED BOARD | |
| 57 | * 1-639-364-11 | MUT LED BOARD | |
| 58 | 4-931-641-01 | BUTTON (DIA. 4) | |
| 59 | * 1-639-363-11 | MUT BOARD | |
| 60 | 4-931-926-01 | BUTTON (B) | |
| 61 | 4-946-732-01 | SPRING (S), LEAF | |
| 62 | 4-946-339-01 | ROD (S) | |
| 63 | 4-946-338-01 | ROD (C) | |

| Ref. No. | Part No. | Description | Remark |
|----------|----------------|--------------------------------------|--------|
| 64 | * 4-946-330-01 | JOINT | |
| 65 | * 1-639-362-11 | tone (J) BOARD | |
| 66 | * 1-639-361-11 | HP BOARD | |
| 67 | 4-942-032-01 | KNOB (POWER) | |
| 68 | 4-946-340-01 | ROD (P) | |
| 69 | * 4-916-782-21 | DAMPER | |
| 70 | 1-572-742-11 | SWITCH, ROTARY | |
| 71 | 1-572-743-11 | SWITCH, ROTARY | |
| J301 | 1-507-796-71 | JACK (HEADPHONES) | |
| RV201 | 1-241-517-11 | RES. VAR. CARBON 250K/250K (BALANCE) | |
| RV202 | 1-241-518-11 | RES. VAR. CARBON 25K/100K (TREBLE) | |
| RV203 | 1-241-519-11 | RES. VAR. CARBON 25K/250K (BASS) | |

3. MAIN CHASSIS



| Ref. No. | Part No. | Description | Remark |
|----------|----------------|---|--------|
| 101 | 4-945-833-11 | WASHER (DIA. 14) | |
| 102 | 4-946-329-01 | RETAINER, ELECT CAP | |
| 103 | * A-4345-377-A | MAIN BOARD, COMPLETE (Canadian, AE1, E) | |
| 103 | * A-4345-378-A | MAIN BOARD, COMPLETE (AE2) | |
| 103 | * A-4345-665-A | MAIN BOARD, COMPLETE (G) | |
| 104 | * 1-639-372-11 | INPUT BOARD | |
| 105 | * 4-946-336-01 | BRACKET (GROUND) | |
| 106 | * 1-639-382-11 | VR J BOARD | |
| 107 | * A-4345-390-A | EQ BOARD, COMPLETE (EXCEPT G) | |
| 107 | * A-4345-391-A | EQ BOARD, COMPLETE (G) | |
| 108 | * A-4345-379-A | TONE BOARD, COMPLETE (EXCEPT AE2) | |
| 108 | * A-4345-380-A | TONE BOARD, COMPLETE (AE2) | |
| 109 | * 1-639-360-11 | VR BOARD | |
| 110 | * 1-639-369-11 | A/B J BOARD | |
| 111 | 4-885-984-21 | WASHER (Canadian, AEP, E) | |
| 112 | * 1-639-368-11 | RELAY (J) BOARD | |
| 113 | * 1-639-367-11 | SP BOARD | |
| 114 | * 1-639-761-11 | OUTLET BOARD (E) | |
| 115 | * 1-639-371-11 | OUTLET BOARD (Canadian) | |
| 116 | * 4-944-612-01 | PANEL, BACK (AE1, G) | |
| 116 | * 4-944-612-11 | PANEL, BACK (AE2) | |
| 116 | * 4-944-612-21 | PANEL, BACK (E) | |
| 116 | * 4-944-612-31 | PANEL, BACK (Canadian) | |
| 117 | * 4-923-873-01 | BRACKET, CORD STOPPER (F570ES) | |
| 118 | * 4-916-782-21 | DAMPER | |

| Ref. No. | Part No. | Description | Remark |
|----------|-----------------|---------------------------------------|--------|
| 119 | * 3-703-244-00 | BUSHING (2104), CORD (F570ES) | |
| 120 | △. 1-574-805-11 | CORD, POWER (AEP, G) | |
| 121 | 1-535-706-11 | PLUG, JUMPER | |
| 122 | * 4-941-033-01 | SCREW, FIXED, FEEDER | |
| 123 | 4-923-882-02 | RING (LARGE-16), ORNAMENTAL, FOOT | |
| 124 | * 4-923-850-01 | FOOT (DIA. 46) | |
| 125 | * 4-916-732-01 | BOARD, BOTTOM | |
| 126 | △. 1-574-381-11 | CORD, POWER (E) | |
| 127 | △. 1-575-975-11 | CORD, POWER (Canadian) | |
| 128 | △. 1-526-565-00 | AC PLUG ADAPTOR (E) | |
| 129 | 4-921-437-01 | SCREW (M3X20), TAPPING (G) | |
| 130 | * 4-941-988-01 | BRACKET (GROUND) (G) | |
| 131 | * 1-639-370-11 | VS (E) BOARD (E) | |
| 132 | * 3-703-571-11 | BUSHING (S) (4516), CORD (F222ESA) | |
| Q309 | 8-729-203-45 | TRANSISTOR 2SC3423-0 | |
| Q312 | 8-729-320-03 | TRANSISTOR 2SC2921M-0 | |
| Q313 | 8-729-320-01 | TRANSISTOR 2SA1215M-0 | |
| Q359 | 8-729-203-45 | TRANSISTOR 2SC3423-0 | |
| Q362 | 8-729-320-03 | TRANSISTOR 2SC2921M-0 | |
| Q363 | 8-729-320-01 | TRANSISTOR 2SA1215M-0 | |
| RV204 | 1-241-516-11 | RES, VAR, CARBON 60K/60K (ATTENUATOR) | |
| T901 | △. 1-450-500-11 | TRANSFORMER, POWER (E) | |
| T901 | △. 1-450-501-11 | TRANSFORMER, POWER (AE2) | |
| T901 | △. 1-450-502-11 | TRANSFORMER, POWER (AE1, G) | |
| T901 | △. 1-450-538-11 | TRANSFORMER, POWER (Canadian) | |

Note:

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 5
ELECTRICAL PARTS LIST

EQ SP RELAY (J)

A/B (J) VS (E) OUTLET INPUT

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- CAPACITORS
uF: μ F

- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA...,
uPB...: μ PB..., uPC...: μ PC...,
uPD...: μ PD...
- CND : Canadian model
- G : Germany model
- AE 2: North European model

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|----------------|-------------------------------|----------|----------|-------------------------|---------------------|----------|
| | * A-4345-390-A | EQ BOARD, COMPLETE (EXCEPT G) | | C308 | 1-101-880-00 | CERAMIC 47PF 5% | 50V |
| | * A-4345-391-A | EQ BOARD, COMPLETE (G) | | | | (EXCEPT G) | |
| | | ***** | | C308 | 1-110-335-11 | FILM 100PF 5% | 50V (G) |
| | * 1-639-367-11 | SP BOARD | | C309 | 1-130-483-00 | MYLAR 0.01uF 5% | 50V (G) |
| | | ***** | | C310 | 1-126-066-11 | ELECT 470uF 20% | 63V |
| | * 1-639-368-11 | RELAY (J) BOARD | | C311 | 1-126-066-11 | ELECT 470uF 20% | 63V |
| | | ***** | | | | | |
| | * 1-639-369-11 | A/B (J) BOARD | | C317 | 1-107-048-00 | MICA 6.8PF | 500V |
| | | ***** | | C318 | 1-126-052-11 | ELECT 100uF 20% | 50V |
| | * 1-639-370-11 | VS (E) BOARD (E) | | C319 | 1-130-467-00 | MYLAR 470PF 5% | 50V (G) |
| | | ***** | | C320 | 1-130-487-00 | MYLAR 0.022uF 5% | 50V (G) |
| | * 1-639-371-11 | OUTLET BOARD (Canadian) | | C321 | 1-130-487-00 | MYLAR 0.022uF 5% | 50V (G) |
| | * 1-639-761-11 | OUTLET BOARD (E) | | | | | |
| | | ***** | | C401 | 1-110-341-11 | MYLAR 330PF 5% | 50V |
| | * 1-639-372-11 | INPUT BOARD | | | | (EXCEPT G) | |
| | | ***** | | C401 | 1-110-335-11 | MYLAR 100PF 5% | 50V (G) |
| | | | | C402 | 1-123-369-00 | ELECT 4.7uF 20% | 50V |
| | * 1-533-213-31 | HOLDER, FUSE | | C403 | 1-126-103-11 | ELECT 470uF 20% | 16V |
| | * 4-946-336-01 | BRACKET (GROUND) | | C404 | 1-136-162-00 | FILM 0.056uF 5% | 50V |
| | | | | | | | |
| | | < BUS BAR > | | C405 | 1-137-471-91 | FILM 0.016uF 5% | 50V |
| BB1 | * 1-560-242-61 | BUS BAR 2P | | C406 | 1-124-122-11 | ELECT 100uF 20% | 50V |
| BB2 | * 1-560-242-61 | BUS BAR 2P | | C407 | 1-130-470-00 | MYLAR 820PF 5% | 50V |
| | | | | C408 | 1-126-059-11 | ELECT 10uF 20% | 50V |
| | | < CAPACITOR > | | C409 | 1-123-345-00 | ELECT 100uF 20% | 35V |
| | | | | | | | |
| C102 | 1-162-282-31 | CERAMIC 100PF 10% | 50V (G) | C410 | 1-123-345-00 | ELECT 100uF 20% | 35V |
| C301 | 1-110-335-11 | MYLAR 100PF 5% | 50V | C413 | 1-124-913-11 | ELECT 470uF 20% | 50V |
| C302 | 1-123-369-00 | ELECT 4.7uF 20% | 50V | C414 | 1-124-913-11 | ELECT 470uF 20% | 50V |
| C303 | 1-110-339-11 | MYLAR 220PF 5% | 50V | C415 | 1-162-284-31 | CERAMIC 150PF 10% | 50V (G) |
| C304 | 1-124-122-11 | ELECT 100uF 20% | 50V | C420 | 1-161-379-00 | CERAMIC 0.01uF 20% | 25V (G) |
| | | | | | | | |
| C305 | 1-124-122-11 | ELECT 100uF 20% | 50V | C421 | 1-161-379-00 | CERAMIC 0.01uF 20% | 25V (G) |
| C306 | 1-107-159-00 | MICA 33PF 5% | 500V | C422 | 1-106-367-00 | MYLAR 0.01uF 5% | 200V (G) |
| | | (EXCEPT G) | | C423 | 1-106-367-00 | MYLAR 0.01uF 5% | 200V (G) |
| C306 | 1-162-815-11 | CERAMIC 47PF 5% | 500V (G) | C425 | 1-162-282-31 | CERAMIC 100PF 10% | 50V (G) |
| C307 | 1-124-910-11 | ELECT 47uF 20% | 50V | C601 | Δ . 1-161-741-00 | CERAMIC 0.001uF 10% | 400V |

EQ **SP** **RELAY (J)** **A/B (J)** **VS (E)** **OUTLET** **INPUT**

Ref. No. Part No. Description Remark

< OUTLET >

CNJ601 Δ. 1-540-062-31 OUTLET, AC (POLAR) (AC OUTLET) (Canadian)
 CNJ601 Δ. 1-540-039-11 OUTLET, AC (NONPOLAR) (1P) (AC OUTLET) (E)

< CONNECTOR >

CNP6 1-560-941-00 PIN, CONNECTOR 4P
 CP3 1-506-906-11 PIN, CONNECTOR 5P
 CP7 * 1-568-202-11 PIN, CONNECTOR (PC BOARD) 10P
 CP8 * 1-568-202-11 PIN, CONNECTOR (PC BOARD) 10P
 CP9 * 1-568-202-11 PIN, CONNECTOR (PC BOARD) 10P

CP10 * 1-580-854-11 PIN, CONNECTOR (PC BOARD) 6P
 CS9 * 1-562-334-00 SOCKET, CONNECTOR 10P
 CS10 1-561-115-00 SOCKET, CONNECTOR 6P
 CS12 1-562-087-00 SOCKET, CONNECTOR 4P

< DIODE >

D301 8-719-933-41 DIODE HZS6C3L
 D302 8-719-912-20 DIODE 1SS120
 D303 8-719-912-20 DIODE 1SS120
 D304 8-719-912-20 DIODE 1SS120
 D305 8-719-912-20 DIODE 1SS120

D306 8-719-912-20 DIODE 1SS120
 D351 8-719-933-41 DIODE HZS6C3L
 D352 8-719-912-20 DIODE 1SS120
 D353 8-719-912-20 DIODE 1SS120
 D354 8-719-912-20 DIODE 1SS120

D355 8-719-912-20 DIODE 1SS120
 D356 8-719-912-20 DIODE 1SS120
 D401 8-719-000-84 DIODE UZL-7M1
 D515 8-719-912-20 DIODE 1SS120
 D516 8-719-912-20 DIODE 1SS120

D521 8-719-912-20 DIODE 1SS120

< CONNECTOR >

DR6 * 1-564-338-00 PIN, CONNECTOR 4P
 EH2 * 1-564-506-11 PLUG, CONNECTOR 3P

< FUSE >

F601 Δ. 1-532-350-00 FUSE, TIME-LAG (T4A) (AEP, G)
 F601 Δ. 1-532-749-11 FUSE, GLASS TUBE (8A 125V) (Canadian)
 F603 Δ. 1-532-350-00 FUSE, TIME-LAG (T4A) (E)
 F604 Δ. 1-532-350-00 FUSE, TIME-LAG (T4A) (E)

< IC >

IC401 8-759-981-98 IC RC4560DD
 IC402 8-759-231-59 IC TA7815S
 IC403 8-759-245-87 IC TA7915S

Ref. No. Part No. Description Remark

< COIL >

L301 1-428-133-11 COIL, AIR-CORE
 L351 1-428-133-11 COIL, AIR-CORE
 L401 1-424-397-11 COIL, CHOKE 200uH (G)
 L402 1-424-397-11 COIL, CHOKE 200uH (G)
 L451 1-424-397-11 COIL, CHOKE 200uH (G)

L452 1-424-397-11 COIL, CHOKE 200uH (G)

< PIN JACK >

PJ1 * 1-573-142-41 JACK, PIN 4P (TAPE1 IN/REC OUT)
 PJ2 * 1-573-142-41 JACK, PIN 4P (TAPE2 IN/REC OUT)
 PJ3 1-568-978-21 JACK 6P (TUNER, CD, AUX)
 PJ4 1-568-978-21 JACK 6P (DIRECT INPUT, ADAPTOR IN/OUT)
 PJ6 1-580-054-11 JACK, PIN 2P (PHONO)

< TRANSISTOR >

Q301 8-729-620-17 TRANSISTOR 2SC2259-FG
 Q302 8-729-140-82 TRANSISTOR 2SA988-PAFAEA
 Q303 8-729-140-82 TRANSISTOR 2SA988-PAFAEA
 Q304 8-729-142-01 TRANSISTOR 2SC1941-LK
 Q305 8-729-201-56 TRANSISTOR 2SK246-GR2

Q306 8-729-140-82 TRANSISTOR 2SA988-PAFAEA
 Q307 8-729-803-76 TRANSISTOR 2SA1371-E
 Q308 8-729-142-01 TRANSISTOR 2SC1941-LK
 Q351 8-729-620-17 TRANSISTOR 2SC2259-FG
 Q352 8-729-140-82 TRANSISTOR 2SA988-PAFAEA

Q353 8-729-140-82 TRANSISTOR 2SA988-PAFAEA
 Q354 8-729-142-01 TRANSISTOR 2SC1941-LK
 Q355 8-729-201-56 TRANSISTOR 2SK246-GR2
 Q356 8-729-140-82 TRANSISTOR 2SA988-PAFAEA
 Q357 8-729-803-76 TRANSISTOR 2SA1371-E

Q358 8-729-142-01 TRANSISTOR 2SC1941-LK
 Q401 8-729-354-52 TRANSISTOR 2SC2545-E
 Q402 8-729-354-52 TRANSISTOR 2SC2545-E
 Q451 8-729-354-52 TRANSISTOR 2SC2545-E
 Q452 8-729-354-52 TRANSISTOR 2SC2545-E

< RESISTOR >

R101 1-246-545-00 CARBON 1.0M 5% 1/4W
 R102 1-246-545-00 CARBON 1.0M 5% 1/4W
 R103 1-246-545-00 CARBON 1.0M 5% 1/4W
 R104 1-246-545-00 CARBON 1.0M 5% 1/4W
 R105 1-246-545-00 CARBON 1.0M 5% 1/4W

R106 1-247-713-11 CARBON 1K 5% 1/4W
 R107 1-247-713-11 CARBON 1K 5% 1/4W
 R108 1-246-545-00 CARBON 1.0M 5% 1/4W
 R109 1-246-545-00 CARBON 1.0M 5% 1/4W
 R110 1-247-739-11 CARBON 100 5% 1/2W

| | |
|---|--|
| <p>Note: The components identified by mark <u>Δ</u> or dotted line with mark <u>Δ</u> are critical for safety. Replace only with part number specified.</p> | <p>Note: Les composants identifiés par une marque <u>Δ</u> sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p> |
|---|--|

EQ **SP** **RELAY (J)** **A/B (J)** **VS (E)** **OUTLINE** **INPUT**

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|----------------------|-------------------|
| R301 | 1-247-713-11 | CARBON | 1K 5% 1/4W |
| R302 | 1-249-469-11 | CARBON | 100K 5% 1/4W |
| R303 | 1-247-704-11 | CARBON | 220 5% 1/4W |
| R304 | 1-247-704-11 | CARBON | 220 5% 1/4W |
| R305 | 1-247-704-11 | CARBON | 220 5% 1/4W |
| R306 | 1-247-717-11 | CARBON | 2. 2K 5% 1/4W |
| R307 | 1-249-490-11 | CARBON | 27K 5% 1/2W |
| R308 | 1-247-704-11 | CARBON | 220 5% 1/4W |
| R309 | 1-247-721-11 | CARBON | 4. 7K 5% 1/4W |
| R310 | 1-249-516-11 | CARBON | 33 5% 1/4W |
| R311 | 1-247-700-11 | CARBON | 100 5% 1/4W |
| R332 | 1-247-727-11 | CARBON | 10 5% 1/2W (G) |
| R333 | 1-247-727-11 | CARBON | 10 5% 1/2W (G) |
| R326 | 1-249-721-11 | CARBON | 100K 5% 1/2W |
| R327 | 1-249-668-11 | CARBON | 620 5% 1/2W |
| R328 | 1-247-727-11 | CARBON | 10 5% 1/2W |
| R405 | 1-247-706-11 | CARBON (EXCEPT G) | 330 5% 1/4W |
| R406 | 1-247-700-11 | CARBON | 100 5% 1/4W |
| R407 | 1-249-469-11 | CARBON | 100K 5% 1/4W |
| R408 | 1-249-469-11 | CARBON | 100K 5% 1/4W |
| R409 | 1-247-710-11 | CARBON | 560 5% 1/4W |
| R410 | 1-247-710-11 | CARBON | 560 5% 1/4W |
| R411 | 1-247-725-11 | CARBON | 10K 5% 1/4W |
| R412 | 1-247-700-11 | CARBON | 100 5% 1/4W |
| R413 | 1-260-661-11 | CARBON | 6. 8 5% 1/4W |
| R414 | 1-247-138-00 | CARBON | 2K 5% 1/4W |
| R415 | 1-247-700-11 | CARBON (EXCEPT G) | 100 5% 1/4W |
| R415 | 1-249-542-11 | CARBON | 390 5% 1/4W (G) |
| R416 | 1-246-545-00 | CARBON | 1. 0M 5% 1/4W |
| R417 | 1-249-844-11 | CARBON | 56K 1% 1/2W |
| R418 | 1-249-818-11 | CARBON | 4. 7K 1% 1/2W |
| R419 | 1-247-713-11 | CARBON | 1K 5% 1/4W |
| R420 | 1-249-421-11 | CARBON | 2. 2K 5% 1/4W (G) |
| R421 | 1-249-421-11 | CARBON | 2. 2K 5% 1/4W (G) |
| R422 | 1-247-713-11 | CARBON | 1K 5% 1/4W |
| R423 | 1-247-713-11 | CARBON | 1K 5% 1/4W |
| R424 | 1-247-713-11 | CARBON | 1K 5% 1/4W |
| R425 | 1-247-713-11 | CARBON | 1K 5% 1/4W |
| R426 | 1-247-713-11 | CARBON | 1K 5% 1/4W |
| R427 | 1-247-713-11 | CARBON | 1K 5% 1/4W |
| R428 | 1-247-713-11 | CARBON | 1K 5% 1/4W |
| R429 | 1-247-713-11 | CARBON | 1K 5% 1/4W |
| R430 | 1-247-249-00 | CARBON | 2. 4K 5% 1/2W |
| R431 | 1-247-249-00 | CARBON | 2. 4K 5% 1/2W |

| Ref. No. | Part No. | Description | Remark |
|---------------|-----------------|---|--------|
| < RELAY > | | | |
| RY502 | 1-515-727-11 | RELAY | |
| RY503 | 1-515-501-00 | RELAY | |
| RY504 | 1-515-501-00 | RELAY | |
| < SWITCH > | | | |
| S101 | 1-571-115-11 | SWITCH, SLIDE (INPUT SELECTOR) | |
| S102 | 1-571-115-11 | SWITCH, SLIDE (REC OUT SELECTOR) | |
| S401 | 1-571-111-11 | SWITCH, PUSH (1 KEY) (CARTRIDGE) | |
| S601 | △. 1-554-920-11 | SWITCH, PUSH (AC POWER) (1 KEY) (POWER) | |
| < CONNECTOR > | | | |
| SE1 | 1-564-320-00 | PIN, CONNECTOR 2P | |
| SE2 | 1-564-320-00 | PIN, CONNECTOR 2P | |
| SE3 | 1-564-321-00 | PIN, CONNECTOR 2P (E) | |
| SE4 | 1-564-321-00 | PIN, CONNECTOR 2P (E) | |
| < TERMINAL > | | | |
| TM301 | 1-537-227-11 | TERMINAL BOARD (SP) (SPEAKER) (AE2) | |
| TM301 | 1-537-228-11 | TERMINAL BOARD (SP) (SPEAKER) (G) | |
| TM301 | 1-537-235-11 | TERMINAL BOARD (SP) (SPEAKER) (Canadian, AE1, E) | |
| < CONNECTOR > | | | |
| VH9 | * 1-564-321-00 | PIN, CONNECTOR 2P | |
| VH10 | * 1-564-321-21 | PIN, CONNECTOR 2P (EXCEPT E) | |
| VH11 | * 1-564-687-11 | PIN, CONNECTOR 3P (Canadian) | |
| VH15 | * 1-566-664-11 | PIN, CONNECTOR 4P (E) | |
| VH16 | * 1-568-226-11 | PIN, CONNECTOR 2P (E) | |
| < SWITCH > | | | |
| VS1 | △. 1-572-009-11 | SELECTOR, VOLTAGE (VOLTAGE SELECTOR) (E) | |

| | |
|--|---|
| <p>Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p> | <p>Note: Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p> |
|--|---|

MAIN **TONE** **VR** **H. P** **TONE (J)** **MUT** **MUT LED** **POWER LED** **VR J**

| Ref. No. | Part No. | Description | Remark |
|----------------|----------------------|--------------------|--------------|
| * A-4345-377-A | MAIN BOARD, COMPLETE | (Canadian, AE1, E) | |
| * A-4345-378-A | MAIN BOARD, COMPLETE | (AE2) | |
| * A-4345-665-A | MAIN BOARD, COMPLETE | (G) | |
| ***** | | | |
| * A-4345-379-A | TONE BOARD, COMPLETE | (EXCEPT AE2) | |
| * A-4345-380-A | TONE BOARD, COMPLETE | (AE2) | |
| ***** | | | |
| * 1-639-360-11 | VR BOARD | | |
| ***** | | | |
| * 1-639-361-11 | H. P BOARD | | |
| ***** | | | |
| * 1-639-362-11 | TONE (J) BOARD | | |
| ***** | | | |
| * 1-639-363-11 | MUT BOARD | | |
| ***** | | | |
| * 1-639-364-11 | MUT LED BOARD | | |
| ***** | | | |
| * 1-639-365-11 | POWER LED BOARD | | |
| ***** | | | |
| * 1-639-382-11 | VR J BOARD | | |
| ***** | | | |
| * 4-942-408-01 | SPACER (DIA. 30) | | |
| | | | |
| < CAPACITOR > | | | |
| C201 | 1-106-363-00 MYLAR | 6800PF | 5% 200V |
| C202 | 1-130-489-00 MYLAR | 0.033uF | 5% 50V |
| C203 | 1-130-491-00 MYLAR | 0.047uF | 5% 50V |
| C204 | 1-136-171-00 FILM | 0.33uF | 5% 50V |
| C206 | 1-136-172-00 FILM | 0.39uF | 5% 50V |
| | | | |
| C312 | 1-126-051-11 ELECT | 47uF | 20% 50V |
| C313 | 1-102-233-00 CERAMIC | 33PF | 10% 500V |
| C314 | 1-102-233-00 CERAMIC | 33PF | 10% 500V |
| C315 | 1-130-487-00 MYLAR | 0.022uF | 5% 50V |
| (EXCEPT AE2) | | | |
| C315 | 1-130-491-00 MYLAR | 0.047uF | 5% 50V (AE2) |
| C316 | 1-130-491-00 MYLAR | 0.047uF | 5% 50V (AE2) |
| C501 | 1-125-695-11 ELECT | 12000uF | 20% 63V |
| C502 | 1-125-695-11 ELECT | 12000uF | 20% 63V |
| C503 | 1-125-694-11 ELECT | 5600uF | 20% 63V |
| C504 | 1-125-694-11 ELECT | 5600uF | 20% 63V |
| | | | |
| C508 | 1-136-880-11 FILM | 2.2uF | 10% 160V |
| C509 | 1-126-069-11 ELECT | 1uF | 20% 100V |
| C510 | 1-126-064-81 ELECT | 220uF | 20% 63V |
| C511 | 1-126-062-11 ELECT | 47uF | 20% 63V |
| C512 | 1-126-219-11 ELECT | 3.3uF | 20% 63V |
| | | | |
| C513 | 1-126-163-11 ELECT | 4.7uF | 20% 50V |
| C517 | 1-126-023-11 ELECT | 100uF | 20% 25V |
| C518 | 1-130-487-00 MYLAR | 0.022uF | 5% 50V |
| C519 | 1-126-023-11 ELECT | 100uF | 20% 25V |
| C520 | 1-130-471-00 MYLAR | 0.001uF | 5% 50V |
| | | | |
| C521 | 1-130-483-00 MYLAR | 0.01uF | 5% 50V |

| Ref. No. | Part No. | Description | Remark |
|---------------|--------------------|---------------------------|-----------|
| C522 | 1-130-483-00 MYLAR | 0.01uF | 5% 50V |
| < CONNECTOR > | | | |
| CP1 | * 1-568-202-11 | PIN, CONNECTOR (PC BOARD) | 10P |
| CP2 | * 1-560-552-00 | PIN, CONNECTOR | 5P |
| CP4 | * 1-568-202-11 | PIN, CONNECTOR (PC BOARD) | 10P |
| CP5 | 1-568-577-11 | PIN, CONNECTOR (PC BOARD) | 3P |
| CP11 | * 1-560-531-00 | PIN, CONNECTOR | 5P |
| | | | |
| CS1 | * 1-562-334-00 | SOCKET, CONNECTOR | 10P |
| CS2 | * 1-562-334-00 | SOCKET, CONNECTOR | 10P |
| CS4 | * 1-562-334-00 | SOCKET, CONNECTOR | 10P |
| CS6 | * 1-563-106-11 | CONNECTOR (SOCKET) | 10P |
| CS7 | * 1-565-835-11 | SOCKET, CONNECTOR | 3P |
| < DIODE > | | | |
| D307 | 8-719-912-20 | DIODE | 1SS120 |
| D308 | 8-719-912-20 | DIODE | 1SS120 |
| D309 | 8-719-912-20 | DIODE | 1SS120 |
| D357 | 8-719-912-20 | DIODE | 1SS120 |
| D358 | 8-719-912-20 | DIODE | 1SS120 |
| | | | |
| D359 | 8-719-912-20 | DIODE | 1SS120 |
| D501 | 8-719-230-02 | DIODE | 30DF2 |
| D502 | 8-719-230-02 | DIODE | 30DF2 |
| D503 | 8-719-230-02 | DIODE | 30DF2 |
| D504 | 8-719-230-02 | DIODE | 30DF2 |
| | | | |
| D505 | 8-719-200-82 | DIODE | 11ES2 |
| D506 | 8-719-200-82 | DIODE | 11ES2 |
| D507 | 8-719-200-82 | DIODE | 11ES2 |
| D508 | 8-719-200-82 | DIODE | 11ES2 |
| D509 | 8-719-200-82 | DIODE | 11ES2 |
| | | | |
| D510 | 8-719-200-82 | DIODE | 11ES2 |
| D511 | 8-719-200-82 | DIODE | 11ES2 |
| D512 | 8-719-313-40 | DIODE | SEL1516W |
| D513 | 8-719-912-20 | DIODE | 1SS120 |
| D514 | 8-719-912-20 | DIODE | 1SS120 |
| | | | |
| D517 | 8-719-912-20 | DIODE | 1SS120 |
| D518 | 8-719-301-49 | DIODE | SEL2810A |
| D519 | 8-719-301-49 | DIODE | SEL2810A |
| D520 | 8-719-912-20 | DIODE | 1SS120 |
| < CONNECTOR > | | | |
| DR4 | * 1-564-339-61 | PIN, CONNECTOR | 5P |
| DR5 | * 1-564-337-00 | PIN, CONNECTOR | 3P |
| EH1 | * 1-564-506-11 | PLUG, CONNECTOR | 3P |
| | | | |
| < IC > | | | |
| IC501 | 8-759-111-68 | IC | uPC1237HA |

MAIN

TONE

VR

H. P

TONE (J)

MUT

MUT LED

POWER LED

VR J

| Ref. No. | Part No. | Description | Remark |
|----------|-----------------|--------------------------|--------|
| | | < JACK > | |
| J301 | 1-507-796-71 | JACK (HEADPHONES) | |
| | | < TRANSISTOR > | |
| Q309 | 8-729-203-45 | TRANSISTOR 2SC3423-0 | |
| Q310 | 8-729-107-53 | TRANSISTOR 2SC2275A-P | |
| Q311 | 8-729-141-10 | TRANSISTOR 2SA985A-QP | |
| Q312 | 8-729-320-03 | TRANSISTOR 2SC2921M-0 | |
| Q313 | 8-729-320-01 | TRANSISTOR 2SA1215M-0 | |
| Q314 | 8-729-140-82 | TRANSISTOR 2SA988-PAFAEA | |
| Q359 | 8-729-203-45 | TRANSISTOR 2SC3423-0 | |
| Q360 | 8-729-107-53 | TRANSISTOR 2SC2275A-P | |
| Q361 | 8-729-141-10 | TRANSISTOR 2SA985A-QP | |
| Q362 | 8-729-320-03 | TRANSISTOR 2SC2921M-0 | |
| Q363 | 8-729-320-01 | TRANSISTOR 2SA1215M-0 | |
| Q364 | 8-729-140-82 | TRANSISTOR 2SA988-PAFAEA | |
| Q501 | 8-729-194-57 | TRANSISTOR 2SC945-P | |
| Q502 | 8-729-141-03 | TRANSISTOR 2SA733-QP | |
| Q503 | 8-729-141-03 | TRANSISTOR 2SA733-QP | |
| Q504 | 8-729-140-96 | TRANSISTOR 2SD774-34 | |
| Q505 | 8-729-620-05 | TRANSISTOR 2SC2603-EF | |
| Q506 | 8-729-620-05 | TRANSISTOR 2SC2603-EF | |
| | | < RESISTOR > | |
| R111 | 1-259-580-11 | CARBON 11K 5% | 1/2W |
| R201 | 1-247-721-11 | CARBON 4.7K 5% | 1/4W |
| R202 | 1-247-712-11 | CARBON 820 5% | 1/4W |
| R203 | 1-246-545-00 | CARBON 1.0M 5% | 1/4W |
| R204 | 1-247-716-11 | CARBON 1.8K 5% | 1/4W |
| R205 | 1-259-502-11 | CARBON 4.7M 5% | 1/4W |
| R206 | 1-259-502-11 | CARBON 4.7M 5% | 1/4W |
| R207 | 1-247-128-00 | CARBON 750 5% | 1/4W |
| R208 | 1-249-577-11 | CARBON 11K 5% | 1/4W |
| R209 | 1-247-138-00 | CARBON 2K 5% | 1/4W |
| R210 | 1-247-152-00 | CARBON 8.2K 5% | 1/4W |
| R211 | 1-259-580-11 | CARBON 11K 5% | 1/2W |
| R314 | △. 1-247-713-11 | CARBON 1K 5% | 1/4W F |
| R315 | 1-247-707-11 | CARBON 390 5% | 1/4W |
| R316 | △. 1-212-990-00 | FUSIBLE 220 5% | 1/2W F |
| R317 | △. 1-212-950-00 | FUSIBLE 4.7 5% | 1/2W F |
| R318 | △. 1-212-950-00 | FUSIBLE 4.7 5% | 1/2W F |
| R319 | 1-217-151-00 | METAL PLATE 0.22 | |
| R320 | 1-217-151-00 | METAL PLATE 0.22 | |
| R321 | △. 1-247-721-11 | CARBON 4.7K 5% | 1/4W F |
| R322 | 1-249-460-11 | CARBON 15K 5% | 1/4W |
| R323 | △. 1-212-962-00 | FUSIBLE 15 5% | 1/2W F |
| R324 | △. 1-212-962-00 | FUSIBLE 15 5% | 1/2W F |
| R325 | 1-247-891-00 | CARBON 330K 5% | 1/4W |

| Ref. No. | Part No. | Description | Remark |
|----------|-----------------|---------------------------------------|------------|
| R329 | 1-247-747-11 | CARBON 470 5% | 1/2W |
| R501 | △. 1-212-849-00 | FUSIBLE 4.7 5% | 1/4W F |
| R502 | 1-247-721-11 | CARBON 4.7K 5% | 1/4W |
| R503 | 1-247-251-00 | CARBON 3K 5% | 1/2W |
| R504 | 1-247-251-00 | CARBON 3K 5% | 1/2W |
| R505 | 1-247-251-00 | CARBON 3K 5% | 1/2W |
| R506 | 1-247-251-00 | CARBON 3K 5% | 1/2W |
| R507 | 1-247-251-00 | CARBON 3K 5% | 1/2W |
| R508 | 1-247-251-00 | CARBON 3K 5% | 1/2W |
| R509 | 1-247-251-00 | CARBON 3K 5% | 1/2W |
| R510 | 1-247-725-11 | CARBON 10K 5% | 1/4W |
| R511 | 1-249-462-11 | CARBON 22K 5% | 1/4W |
| R512 | 1-249-465-11 | CARBON 47K 5% | 1/4W |
| R513 | 1-249-465-11 | CARBON 47K 5% | 1/4W |
| R515 | 1-247-706-11 | CARBON 330 5% | 1/4W |
| R516 | 1-247-706-11 | CARBON 330 5% | 1/4W |
| R517 | 1-247-249-00 | CARBON 2.4K 5% | 1/2W |
| R518 | 1-247-249-00 | CARBON 2.4K 5% | 1/2W |
| R519 | 1-247-092-00 | CARBON 24 5% | 1/4W |
| R520 | 1-247-721-11 | CARBON 4.7K 5% | 1/4W |
| R521 | 1-249-461-11 | CARBON 18K 5% | 1/4W |
| R522 | 1-247-881-00 | CARBON 120K 5% | 1/4W |
| R523 | 1-247-725-11 | CARBON 10K 5% | 1/4W |
| R524 | 1-247-887-00 | CARBON 220K 5% | 1/4W |
| R525 | 1-247-757-11 | CARBON 2.7K 5% | 1/2W |
| R526 | 1-247-757-11 | CARBON 2.7K 5% | 1/2W |
| R527 | 1-249-462-11 | CARBON 22K 5% | 1/4W |
| R529 | 1-247-742-11 | CARBON 180 5% | 1/2W |
| | | (EXCEPT AE2) | |
| R529 | 1-247-211-00 | CARBON 62 5% | 1/2W (AE2) |
| R530 | 1-247-717-11 | CARBON 2.2K 5% | 1/4W |
| R531 | 1-247-251-00 | CARBON 3K 5% | 1/2W |
| R540 | 1-247-721-11 | CARBON 4.7K 5% | 1/4W |
| R541 | 1-247-721-11 | CARBON 4.7K 5% | 1/4W |
| R542 | 1-247-758-11 | CARBON 3.3K 5% | 1/2W |
| | | (EXCEPT AE2) | |
| R542 | 1-247-757-11 | CARBON 2.7K 5% | 1/2W (AE2) |
| R543 | 1-247-758-11 | CARBON 3.3K 5% | 1/2W |
| | | (EXCEPT AE2) | |
| R543 | 1-247-757-11 | CARBON 2.7K 5% | 1/2W (AE2) |
| | | < VARIABLE RESISTOR > | |
| RT301 | 1-237-455-11 | RES. ADJ. CARBON 500 | |
| RT351 | 1-237-455-11 | RES. ADJ. CARBON 500 | |
| RV201 | 1-241-517-11 | RES. VAR. CARBON 250K/250K (BALANCE) | |
| RV202 | 1-241-518-11 | RES. VAR. CARBON 25K/100K (TREBLE) | |
| RV203 | 1-241-519-11 | RES. VAR. CARBON 25K/250K (BASS) | |
| RV204 | 1-241-516-11 | RES. VAR. CARBON 60K/60K (ATTENUATOR) | |

Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN **TR** **VR** **H. P** **TR** **(J)** **MUT** **MUT LED** **POWER LED** **VR J**

Ref.No. Part No. Description Remark

< RELAY >

RY501 1-515-727-11 RELAY
RY505 1-515-787-11 RELAY

< SWITCH >

S201 1-572-738-11 SWITCH, PUSH (3 KEY) (SUBSONIC)
S202 1-572-741-11 SWITCH, PUSH (1 KEY) (SORCE DIRECT)
S203 1-572-738-11 SWITCH, PUSH (3 KEY) (MODE)
S204 1-572-738-11 SWITCH, PUSH (3 KEY) (DIRECT INPUT)
S205 1-572-740-11 SWITCH, PUSH (1 KEY) (MUTING-20dB)

S206 1-572-739-11 SWITCH, PUSH (2 KEY) (SPEAKER A)
S207 1-572-739-11 SWITCH, PUSH (2 KEY) (SPEAKER B)
S208 1-572-143-11 SWITCH, SLIDE (SOURCE DIRECT)

< CONNECTOR >

VH1 * 1-564-241-00 PIN, CONNECTOR 4P
VH2 1-564-320-00 PIN, CONNECTOR 2P
VH5 * 1-564-241-00 PIN, CONNECTOR 4P

MISCELLANEOUS

70 1-572-742-11 SWITCH, ROTARY
71 1-572-743-11 SWITCH, ROTARY
120 △. 1-574-805-11 CORD, POWER (AEP, G)
121 1-535-706-11 PLUG, JUMPER
126 △. 1-574-381-11 CORD, POWER (E)

127 △. 1-575-975-11 CORD, POWER (Canadian)
128 △. 1-526-565-00 AC PLUG ADAPTOR (E)
T901 △. 1-450-500-11 TRANSFORMER, POWER (E)
T901 △. 1-450-501-11 TRANSFORMER, POWER (AE2)
T901 △. 1-450-502-11 TRANSFORMER, POWER (AE1, G)

T901 △. 1-450-538-11 TRANSFORMER, POWER (Canadian)

ACCESSORY & PACKING MATERIAL

3-753-600-11 MANUAL, INSTRUCTION
(ENGLISH, FRENCH, SPANISH, PORTUGUESE)
(Canadian, AE1, E)
3-753-600-41 MANUAL, INSTRUCTION
(GERMAN, DUTCH, SWEDISH, ITALIAN)
(AE1, AE2, G)
* 4-929-219-01 CUSHION
* 4-945-284-01 INDIVIDUAL CARTON (F570ES)
* 4-945-286-01 INDIVIDUAL CARTON (F222ESA)

Ref.No. Part No. Description Remark

HARDWARE LIST

#1 7-685-234-19 SCREW +KTP 2.6X8 TYPE2NON-SLIT
#2 7-682-547-09 SCREW +BVTT 3X6 (S)
#3 7-685-647-79 SCREW +BTP 3X10 TYPE2 N-S
#4 7-685-650-79 SCREW +BVTP 3X16 TYPE2 SLIT
#5 7-682-548-09 SCREW (3X8)

#6 7-682-565-09 SCREW +B 4X16 (G)
#6 7-682-566-09 SCREW +B 4X20 (Canadian, AEP, E)
#7 7-684-024-04 N 4, TYPE 2
#8 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
#9 7-685-876-09 SCREW +BVTT 3X16 (S)

#10 7-621-849-00 SCREW, TAPPING (G)

| | |
|--|--|
| <p>Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p> | <p>Note: Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p> |
|--|--|